Patent Application
Attorney Docket No.: 57983.000011
Client Reference No.: 11889RRUS01U

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: :
                                   :
    Gregory T. Osterhout et al.   :   Group Art Unit: 2264
                                   :
Appln. No.: 09/671,736   :
                                   :   Examiner: D. Ryman
Filed: September 29, 2000   :
                                   :
For: SYSTEM AND METHOD FOR NETWORK :
     PHONE HAVING ADAPTIVE   :
     TRANSMISSION MODES   :

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION UNDER 37 C.F.R. § 1.131

Sir:

I, Gregory T. Osterhout, hereby declare that I am a co-applicant in the above-identified patent application and that I am also a co-inventor of the invention that is described and claimed in the above-identified patent application. I also hereby declare that prior to November 10, 1999, my co-inventors and I conceived of the invention that is described and claimed in the above-identified patent application as evidenced by the following:

1. Prior to November 10, 1999, my co-inventors and I conceived of the invention in the United States and Canada, which is a NAFTA and WTO member country. Date redacted copies of email which describe reduction to practice of the claimed

invention are attached hereto as Exhibit A. At the time of the invention, I owed a duty of assignment of the invention to Nortel Networks Limited (hereinafter "Nortel").

2. Shortly after my co-inventors and I conceived of the invention, my co-inventors and I submitted a description of the invention to the appropriate Nortel patent review committee for purposes of obtaining approval to file a patent application for the invention. A date redacted copy of the description of the invention (i.e., our invention disclosure) is attached hereto as Exhibit B.

3. To the best of my knowledge, the Nortel patent review committee followed its standard procedures in reviewing and subsequently approving of the filing of a patent application based upon our invention disclosure. A date redacted copy of an internal Nortel memo approving the filing of the patent application is attached hereto as Exhibit C.

4. On March 1, 2000, our invention disclosure was forwarded to one of Nortel's outside patent attorneys for preparation of a patent application. A copy of a transmittal letter authorizing preparation of a patent application is attached hereto as Exhibit D.

5. Between March 1, 2000, and August 11, 2000, my co-inventors and I had discussions regarding our invention disclosure with the outside patent attorneys, and provided

additional supporting materials to the outside patent attorneys, all intended to assist the outside patent attorneys in preparing a patent application for the invention.

6.   On August 11, 2000, my co-inventors and I were forwarded a draft of the patent application. A copy of the transmittal letter sending the draft is attached hereto as Exhibit E.

7.   On August 18, 2000, my co-inventor was forwarded a draft of the patent application. A copy of the transmittal letter sending the draft is attached hereto as Exhibit F.
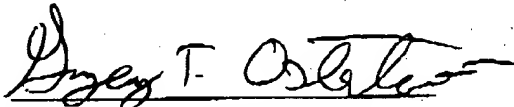
8.   On August 21, 2000, my co-inventor was forwarded a draft of the patent application. A copy of the transmittal letter sending the draft is attached hereto as Exhibit G.

9.   On August 28, 2000, my co-inventors were forwarded a final draft of the patent application. A copy of the transmittal letter sending the draft is attached hereto as Exhibit H.

10.   On September 27, 2000, I executed the above-identified patent application. A copy of my signed declaration filed with the application is attached hereto as Exhibit I.

11.   On September 29, 2000, the above-identified patent application was filed. A copy of the filing receipt for the application is attached hereto as Exhibit J.

I further hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

DECLARANT: _Gregory T. Osterhout_
Gregory T. Osterhout

Date: _12-22-04_

From: Ameen, Mehmud [KAN:0M23:EXCH] [IMCEAEX-
_O=NORTEL_OU=AMERICASM01_CN=RECIPIENTS_CN=EXCHANGE_CN=0525551@AmericasM0

Sent:

To: Sosebee, Mark [NGC:B631:EXCH]

Subject: RE: Messages for USB-SIP server

Hi Mark

The attachment lists the messages and the byte fields. On a simplified level we only need the setup, setup acknowledge, call proceeding, disconnect and audio messages. These are sufficient to set up an end-to-end communication. However, there is some merit in adding register client, regsiter client acknowledgement, connect and connect acknowledgement messages. These are all described in detail in the attachment.

Once the connection has been established the audio message can be used to shuttle the conversation audio data between the two parties. The USB client will send the data to the SIP server which can adapt and forward it to the remote phone and vice versa.

The issue of multiple conversations between pairs of telephones still needs to be resolved. The SIP server structure should allow for this.

Best regards
Mehmud

<<messages.doc>>

-----Original Message-----
From: Sosebee, Mark [RICH6:B400:EXCH]
Sent:
To: Ameen, Mehmud [KAN:0M23:EXCH]
Subject: RE: Messages for USB-SIP server

Can you send the format of all msgs that are currently generated between the USB Gateways. After the conversation yesterday I think there are only 2 msgs the initiateCall and the ACK. If there are any others please include them.

Thanks for the info,

Mark

-----Original Message-----
From: Ameen, Mehmud [KAN:0M23:EXCH]
Sent:
To: Sosebee, Mark [RICH6:B400:EXCH]
Cc: Osterhout, Greg [RICH6:B400-M:EXCH]
Subject: Messages for USB-SIP server

Hi Mark

I have spent sometime looking at the UNISTIM protocol specification. I think to get the basic voice call from a PSTN phone to my USB phone I only need the following commands:

USB PHONE ===> USB Gateway ==> SIP/USB Server ==> PSTN ==> Remote phone (Simplified diagram for call setup)

A. Call from a USB phone to a phone on the PSTN

1. Setup Command to the called number: Parms: Calling party number, Called party Number. Somebody along the way has to convert the telephone numbers into IP addresses and send the media ports for RTP. I did not find any UNISTIM command that takes a normal telephone number as a paramter for call setup. The softphone (H.323 client) setup command does.The Open Audio Stream command only takes port numbers and the IP address. Also, I don't think we need a separate command to open the media ports and do call setup. Both the connection setup and the media ports can be opened in one command.

2. Acknowledgement or a connect message from the called party indicating that connection is made.

I am not sure if we need the call proceeding or alerting messages as used by the softphone using the H.323 setup. Once the connection is confirmed the USB client will turn on the AUDIO.

3. A connection teardown from either phone to the other phone on a on-hook or release event.The USB client will observe an on-hook event on the USB phone and send a Disconnect command to the remote phone. Or the remote phone will send a disconnect command and the USB client will do shut down.

B. USB phone receives a PSTN call

1. The USB phone receives a setup command
2. Acknowledges by sending a connect command or an ack command.
3. Tears down connection on a disconnect event.

The USB phone plays 8byte audio samples every 1ms (giving 64kbps). To increase the thoughput over the IP/Ethernet network I normally buffer my speech before I send it to the USB gateway. The USB gateway then takes 8bytes of raw PCM speech and sends its every one msec to the USB phone. We may have to play around with the audio packet size to get the best performance over the IP network.

I am still not very familiar with the UNISTIM and SIP protocols and am open to suggestions. We may have to add more commands to get the communication going. Please let me know. One thing to keep in mind is that I have been using native UDP to do all my connection setup and audio transmission for calls between USB phones. UNISTIM uses the reliable UDP protocol. This may mean code rewrite for me unless we can work something out.

The other thing that we need to worry about is the ability to query the menu options and services on the remote phone and display these on the two-line USB phone display for caller selection. The caller can scroll up/down the list using the up/down keys on the usb phone key pad. Somehow we need a mechanism to send the menu option commands back to the called phone for appropriate action. One solution could be to append a * to the called number and then to select a particular option we send the option as *option. For example if were dialing 621-5555, 621-5555* will return all the options without connecting the call and then 621-5555*1 will activate the first option. If option 1 was another submenu then the process could be repeated until we reach to the desired option. So 621-5555*1*5 would mean the 5th item on the first option, etc. The first time around it no doubt be tideous going through all the menu options but the user will be able to store the commonly used options as hyperlinks on the save keys of the USB phone keypad. The next time around one key push will lauch the correct option. These are my initial thoughts on how this can be implemented. Again I look forward to your comments.

I will be making arrangements to come and see you but I would like both of us have a fairly good understanding of what needs to be done. This will make the meeting more productive. I will bring a laptap and the USB phone gear so we can do some joint development and testing. How is early next week for you? Mark, do you have an emulated version of the E2 phone using UNISTIM and the SIP server. I would like to initiate calls between two E2 phones to see what messages are passed between the two using a protocol sniffer.

Best regards

Mehmud Ameen

NSaPN/CPS, Nortel Networks

21 Richardson Side Road, Kanata, Ontario, K2K 2C1

Canada

E-mail: <mailto:mehmud@nortelnetworks.com>

Phone: (613) 763 - 9733 (ESN 393)

Fax: (613) 765 - 2173 (ESN 395)

```c
#define MAXNUMSIZE 16
#define MAXACTIONSIZE 128
#define MAXAUDIOSIZE 512

/* Message category */
typedef enum
{
        SIP = 101    /* Sip server messages. */
};

/* Message Type values */
typedef enum
{
        ALERTING           = 0x01,    /* Alerting */
        CALL_PROCEEDING    = 0x02,    /* Call proceeding */
        CONNECT            = 0x07,    /* Call Connect. */
        CONNECT_ACK        = 0x0F,    /* Connect acknowledge. */
        SETUP              = 0x05,    /* Call setup. */
        SETUP_ACK          = 0x09,    /* Call setup acknowledge. */
        DISCONNECT         = 0x45,    /* Call disconnect. */
        REGISTER           = 0x0A,    /* Register Client. */
        REGISTER_ACK       = 0x0B,    /* Register Client ack. */
        AUDIO              = 0x0C
};

/* Registration status values */
typedef enum
{
        REGISTERED,
        REJECTED
};

/* Progress Indicator values. */
typedef enum
{
        SETUPINPROGRESS,
        SETUPREJECTED,
        SETUPCOMPLETE,
        CONNECTED,
        DISCONNECTED
}

/*    Register Client - This command is optional. It can be used to
register the client with the gatekeeper or a network
server/gateway. The registration establishes a mapping between the
telephone number and the IP address of the client. Alternatively,
the registration could be automatically done by the server when it
receives a setup message from the client. All the registration
information is already available in the setup message. The
telephone of the calling party is known so is the Ip address.
*/
typedef struct
{
        unsigned char  messageCategory; /* 1 byte message category. */
        unsigned char  messageType;     /* 1 byte message type.*/
        unsigned long  callingPartyIPAddress; /* IP address of client. */

        /* 2 bytes - Length of the calling party number in bytes. */
        unsigned short lenCallingPartyNo;

        /* MAXNUMSIZE bytes - extract only the last lenCallingPartyNo
```

```c
        bytes from this field.
     */
     unsigned char      callingPartyNo[MAXNUMSIZE];
} TregisterClient, *PRegisterClient;

/*   Register Acknowledge - This message is returned by the network to
     indicate that the client has been registered. Used only if the
     Register Client message is used.
*/
typedef struct
{
     /* One byte message category = USB class or SIP class messages -
        will be defined later
     */
     unsigned char      messageCategory;
     unsigned char      messageType;

     /* Indicates whether the client was registered. */
     unsigned char      status;
} TRegisterClient *PRegisterClient;

/*   Setup Message - This message is sent by the calling user to the
     network and by the network to the called user to initiate call
     establishment.
*/
typedef struct
{
     unsigned char      messageCategory;
     unsigned char      messageType;
     unsigned short     callRefValue;      /* See note */
     unsigned short     lenCallingPartyNo;
     unsigned char      callingPartyNo[MAXNUMSIZE];
     unsigned short     lenCalledPartyNo;
     unsigned char      calledPartyNo[MAXNUMSIZE];
     unsigned char      setupActionType;
     unsigned short     lenActionString;
     unsigned char      actionString[MAXACTIONSIZE];
} TCallSetupMessage, *PCallSetupMessage;

/*   Setup Acknowledge - This message is sent by the network to the
     calling user, or by the called user to the network, to indicate
     that call establishment has been initiated, but additional
     information may be requested.
*/
typedef struct
{
     unsigned char      messageCategory;
     unsigned char      messageType;
     unsigned short     callRefValue;
     unsigned short     progressIndicator;
     unsigned short     lenResponseString;
     unsigned char      responseString[MAXACTIONSIZE];
} TCallSetupAck,   *PCallSetupAck;

/*   Call Proceeding - this message is sent by the called user to the
     network or by the network to the calling user to indicate that
     requested call establishment has been initiated and no more call
     establishment information will be accepted.
*/
typedef struct
{
```

```c
        unsigned char      messageCategory;
        unsigned char      messageType;
        unsigned short     callRefValue;
        unsigned short     progressIndicator;
} TCallProceeding, *PCallProceeding;

/*      Connect - This message is optional. It is sent by the called user
        to the network and by the network to the calling user, to indicate
        call acceptance by the called user. The Setup acknowledge message
        may be used alternatively to indicate call connect.
*/
typedef struct
{
        unsigned char      messageCategory;
        unsigned char      messageType;
        unsigned short     callRefValue;
        unsigned short     progressIndicator;
} TCallConnect,           *PCallConnect;

/*      Connect Acknowledgement - This message is optional and only used
        if the connect message is used. It is sent by the network to the
        called user to indicate that the user has been awarded the call.
*/
typedef struct
{
        unsigned char      messageCategory;
        unsigned char      messageType;
        unsigned short     callRefValue;
} TCallConnectAck,        *PCallConnectAck;

/*      Disconnect - This message is sent by the user to request the
        network to clear an end-to-end connection or is sent by the
        network to indicate that the end-to-end connection is cleared.
*/
typedef struct
{
        unsigned char      messageCategory;
        unsigned char      messageType;
        unsigned short     callRefValue;
        unsigned short     progressIndicator;
} TCallDisconnect,        *PDisconnect;


/*      Audio - This message carries the audio data between the two
        phones.
*/
typedef struct
{
        unsigned char      messageCategory;
        unsigned char      messageType;
        unsigned short     callRefValue;
        unsigned short     lenAudioData;
        unsigned char      audioData[MAXAUDIOSIZE];
} TCallSetupAck,   *PCallSetupAck;


/*      Notes:
        1.     The call reference value (CRV) is used to identify a call.
               It is assigned by the originating side of the interface for
               a acall. It is unique to the originating side only for a
               given call. The CRV is assigned at the beginning of a call
```

and remains fixed for the lifetime of a call. After a call
ends the value may be resued.

*/

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Invention Disclosure Submission Reply

(Attachments?: NO)

Your Invention Disclosure Submission Has Been Received in the
Patent Database on   **You Will Receive An**
Acknowledgement From the Patent Department Within Two Weeks.

You May **Print** the Following Record of Your Transaction by
Selecting File...Print Within Netscape.

Disclosure Number:	11889122

Invention Title: SIP-Based USB Phone	
Full legal name of first inventor: GREGORY T OSTERHOUT **Name usually known as:** GREGORY	**Residence address:** 313 FALCON CT, COPPELL, TX, 75019, UNITED STATES
Global ID Number: 1585519	**Citizen of:** UNITED STATES
Phone: 4444989	**Fax:** 9726843705
External Phone: 9726844989	**External Fax:** 9726843705
Location: NGC	**Mailstop:** G720SA50
Department: B400	**Occupation:** SENIOR MANAGER IP ADVANCED SERVICES
Were there additional inventors involved? yes	**Was there contractor involvement?** no

Name of supervisor or divisional head: KIM HOLMES	Name of AVP reported to: BRUCE GALT

LOB:
Carrier Solutions

Business Unit:
Technology

Date of first written description:

Has this invention been discussed with others? If so, please complete:

Inside Nortel - to whom?

Inside Nortel - when?

Outside Nortel - to whom?

Outside Nortel - to when?

Was there a Non-Disclosure Agreement in place?
no

Are you aware of any imminent disclosures? Please provide dates and details.
No

Key words for searching:
SIP, USB

Products that will use this invention:
This service is to be implemented as part of the NetFX services portfolio. This service has a great deal of potential in the emerging SIP-enabled multi-media networks, which are primarily implemented using IP protocols. The concept behind this service is such that it would be fairly obvious that a competitor has implemented a very similar type of capability. This type of service would very likely be something that competitors to Nortel would have a great interest in, and as such would place Nortel in an excellent position to reap royalty benefits or to negotiate reciprocal agreements for the royalty-free use of competitors' patent(s).

Does this invention arise from any arrangement involving any external organization? no	
Is the invention relevant to a Standards activity? yes	**If so, give details:** The invention uses both the SIP and USB protocols. The SIP protocol is a standard held by the Internet Engineering Task Force (IETF). The USB protocol includes but is not limited to Nortel USB, Microsoft USB, or any USB device controlled by set API. The invention is for the SIP-Based USB phone functionality itself and as such is not related to any given standard. No form of this service definition has been submitted to any standards forum.

Internal project numbers under which this invention was funded:
6295

Technical Information:

Brief description of the invention:
This invention provides a SIP-Based USB Phone that interacts with an application running on a PC. The phone would have the following capabilities: 1) Communicate over a SIP network to SIP devices on the far end. 2) Provide a PSTN backup. 3) Multi-media control between the phone and PC. An RTP stack would reside in the SIP-Based USB phone to allow voice over IP. The RTP connection between end points is setup via SIP. The phone itself could contain a complete SIP stack or the phone could communicate with a USB gateway that would perform the SIP stack functionality. The phone could detect errors in the SIP network that would not allow a connection between the end points and allow calls to be completed using the PSTN backup functionality. A set of services would exist between the SIP-Based USB phone and the PC application. These services would include such things as intercom services or input/output connections to various media applications on the PC. For example, the phone could be used as a microphone input to a speech recognition engine that is providing dictation. The intercom service allows you to broadcast voice messages to multiple users on a network using there desired PC media device to deliver the message.

Problem solved by the invention:
This invention disclosure allows SIP-Based USB phones the ability to interact with multi-media applications running on a PC as well as the ability to communicate across a SIP network to other SIP enabled devices.

Solutions that have been tried and why they didn't work:
None

Specific elements or steps that solved the problem and how they do it:
This invention allows interactions between an application running a PC and a SIP-Based USB phone. This allows a bridge between multi-media applications on a PC and the capabilities of a SIP-based USB phone. This allows applications to be controlled remotely using SIP to setup the session between the end points, as well as an input/output source for resources on the PC.

Commercial value of the invention to Nortel and Nortel's major competitors:
Evaluation of the commercial value of this invention to Nortel Networks and its competitors has not yet been performed. The residential market is most likely to be the purchasers of this device, however the use of the device is dependent on IP bandwidth the location and SIP enabled network proxy servers (managed by a service provider).

Additional Inventors:

Full legal name of inventor #2: JIM J MCALEAR Name usually known as: JIM	Residence address: 2 LONE MEADOW TRAIL, STITTSVILLE, ON, K2S1C9, CANADA
Global ID Number: 1533026	Citizen of: CANADA
Phone: 3938648	Fax: 6137652173
External Phone: 3938648	External Fax:
Location: KAN	Mailstop: 1171ED03
Department: 0W03	Occupation: ENGINEER/MANAGER

Full legal name of inventor #3: MARK SOSEBEE Name usually known as: MARK	Residence address: 920 GOODWIN DRIVE, PLANO, TX, 75023, UNITED STATES
Global ID Number: 0505693	Citizen of: UNITED STATES
Phone: 4444225	Fax:
External Phone: 972-398-2910	External Fax:
Location: NGC	Mailstop: G7205A50
Department: B400	Occupation:

Eric F. Jensen
Sr. IP Counsel
Access Networks
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How the world shares ideas.

Memorandum

**NORTEL NETWORKS CONFIDENTIAL &
PRIVILEGED COMMUNICATION**

Date   March 1, 2000

To   *Greg Osterhout, Jim McAlear, Mark Sosebee*

Copy   Scott Balderston, Hunton & Williams

From   *Eric Jensen*

Subject   **Invention Disclosure No. 11889RRUS01U**
entitled **SIP-Based USB Phone**

As previously indicated, the filing of a U.S patent application for the invention disclosed in the above-subject invention disclosure has been approved.

The Nortel Networks IP Law Group has retained Scott Balderston of Hunton & Williams (Telephone No. 202-955-1935) to prepare the patent application. You should be contacted by that individual (or a patent professional from that firm) within the next 7 to 10 days to discuss the preparation of the patent application and to develop a schedule for meeting the above-subject target filing date. If there are multiple inventors, that individual will also be contacting them at a later date (prior to the filing of the patent application). You will be working directly with this patent professional and should address any questions or concerns regarding the preparation of the patent application directly with that individual.

As an inventor who is likely to be named on a U.S. patent application, you have two duties:

1. Provide sufficient information about the invention in the patent application to enable one of ordinary skill in the area of the invention to make and use the invention; and

2. Disclose prior art that is relevant to the patent application.

The patent professional will further discuss both of these duties with you.

In meeting the first listed duty above, it will be very beneficial for you to immediately start gathering any written material you have describing the invention. Design documents, charts, and particularly drawings that represent the invention can generally be used in preparing the patent application. Please compile this information and have it ready for the patent professional. (If such written material does not exist, you will not necessarily be expected to create it, although you will be expected to describe it in detail to the patent professional.

Generally, the patent professional will visit you in person to discuss the particulars of the invention. At that meeting the invention information you have compiled will be particularly beneficial. The patent professional will then prepare a draft patent application that you will have to review. If there are multiple inventors, you and the patent professional will have to decide when during the drafting of the patent application the other inventors should review the application. Before the application can be filed with the United States Patent and Trademark Office (USPTO) *every* inventor must read and approve the patent application.

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How the world shares ideas.

Once each inventor has approved the patent application, each inventor will have to sign a Declaration and Power of Attorney. This document states that each named inventor is an inventor of the invention disclosed and claimed in the patent application and grants permission to Nortel Networks and its patent professionals to represent that inventor before the USPTO with respect to the application. Each inventor will also have to sign an Assignment of their rights in the patent application and invention to Nortel Networks as required by their Employment Agreement with Nortel Networks.

Finally, while the patent application for the invention is a legal document, it is also a technical document. If it is technically deficient in describing the invention, that can impact the validity of the patent that issues from the application. You should therefore feel comfortable with and understand the patent application. If you do not, then please work with the patent professional to make the application technically accurate.

Should questions or comments arise during the preparation of the patent application, please seek to address them with the above-named patent professional. If you do not get an acceptable response, then please feel free to contact me directly.

Let me again remind you that throughout the patent application process, the subject matter of the invention disclosure should continue to be regarded as Nortel Networks Confidential information and should be safeguarded against public disclosure. Any disclosure of the invention to any non-Nortel Networks employee (not subject to a confidentiality agreement) or outside of Nortel Networks prior to the filing of the patent application with a government patent office could compromise Nortel Networks' ability to obtain patent protection for the invention. Accordingly, it is important that you advise me and the above-named patent professional well in advance of any planned public disclosure of the invention. Should any public disclosure of the invention have already occurred, or is planned to occur, please notify us so that appropriate steps can be taken to potentially avoid adverse legal consequences. Thank you.

LuGay Blanscet
Patent Administrator/Outsourcing Liaison
Intellectual Property Law Group

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How the world shares ideas.

**NORTEL NETWORKS CONFIDENTIAL &
PRIVILEGED COMMUNICATION**

March 1, 2000

Mr. Scott D. Balderston
Hunton & Williams
1900 K Street, NW
Washington, D.C. 20006-1109

Re: **Invention Docket No.: 11889RRUS01U**
Title: SIP-Based USB Phone

Dear Scott:

Nortel Networks would like to retain your firm to prepare and file in the United States Patent and Trademark Office (USPTO) a patent application directed to the invention disclosed in the enclosed invention disclosure by the above-referenced filing date. The application should be prepared according to Nortel Networks guidelines, and in accordance with the predetermined fee we have agreed with your firm. If you are unable to perform the requested work, please advise me immediately.

In addition to the invention disclosure, an invention disclosure Review Summary document is enclosed for your consideration. We request that you contact the primary inventor, Gregory Osterhout at 972-684-4989 within two weeks of receiving this letter. Please ensure that the inventor(s) are advised of their responsibilities regarding their duty of candor to the USPTO, as well as any other relevant rules and/or laws including the best mode requirement.

We also ask that you quickly review the contents of this letter and its enclosures to ascertain whether or not any bar dates appear to be imminent. If so, we ask that you develop a plan of action to protect Nortel Networks' intellectual property rights in the invention disclosure.

Questions pertaining to substantive issues associated with the application should be addressed with Eric Jensen, the responsible attorney, at (919)997-2350, while administrative issues associated with the applications should be addressed with me. Please be sure that all communications associated with the application, including billing statements and the application itself bear the above-referenced disclosure number.

Please send a substantially complete and final draft of the application to me along with a completed Nortel Networks Outsource's Patent Application Checklist at least 10 days prior to the above-referenced filing date to provide Nortel Networks' Intellectual Property Law Group sufficient opportunity to review the application prior to filing. You should seek to obtain the signatures on the formal papers from all inventors directly.

Upon filing the application with the USPTO, immediately fax a copy of the application transmittal letter and Declaration to me, so that we have a record that the application has been filed.

Thereafter, please send me a hardcopy of the application as filed along with an electronic copy in Microsoft Word 6.0 readable format on a 3 ½" floppy disk.

Please confirm receipt of this letter via facsimile. Should you have any questions, please call me at (972)685-4802.

Regards

LuGay Blanscet
Patent Administrator
INTELLECTUAL PROPERTY LAW GROUP
NORTEL NETWORKS
972/685-4802 ESN: 445

Enclosures:

cc: Invention Disclosure
        Review Summary

HUNTON&
WILLIAMS

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SCOTT D. BALDERSTON
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EMAIL: sbalderston@hunton.com
FILE NO: 56130.000011

August 11, 2000
PRIVILEGED AND CONFIDENTIAL
ATTORNEY WORK PRODUCT

VIA UPS

Kathlyn Hunter
Office Manager
Nortel Networks Limited
4006 E. Hwy 54
NC2 MSD16/02/0E2
Durham, NC 27713

Re: Draft Patent Application
Title: System and Method for Network Phone Having Adaptive Transmission Modes
Your Reference No.: 11889RRUS01U

Dear Kathlyn:

This letter encloses a completed draft application for the above-referenced invention. This draft incorporates all changes that were suggested by the inventors to date, and should be in complete or substantially complete form.

Could you kindly distribute the application to the responsible Nortel attorney for review. In the absence of that attorney's comments or instructions to the contrary, we will begin to prepare the application for filing by   . We will arrange to obtain the declarations and assignments from the inventors at that time.

If you have any questions, please do not hesitate to call.

Very truly yours,

Scott D. Balderston

Scott D. Balderston

SDB:dmo

Enclosure(s)

HUNTON & WILLIAMS

August 18, 2000

PRIVILEGED AND CONFIDENTIAL
ATTORNEY WORK PRODUCT
VIA UPS

Jim J. Mcalear
Nortel Networks Limited
21 Richardson Side Road
Kanata, Ontario, CANADA
K2K 2C1

Re: Declaration and Assignment
      "System and Method for Network Phone Having Adaptive Transmission Modes"
      Nortel Reference: 11889RRUS01U

Dear Jim:

This letter encloses the Declaration and Power of Attorney and Assignment for the above referenced patent application. A copy of the patent application is also enclosed.

Could you please sign and date the Declaration and Assignment, and return the papers to us in the enclosed UPS package. for filing with the Government. (Please note that the Assignment has a witness line, as well). We also forwarded a copy of the Declaration and Assignment to Greg Osterhout and Mark Sosebee for the same.

Thanks for your attention to these papers. After we receive them, we will file the application with the Government. We look forward to securing patent recognition for you and the company.

Very truly yours,

Scott Balderston

Scott D. Balderston

SDB:dmo
Enclosure(s)

HUNTON& WILLIAMS

August 21, 2000

PRIVILEGED AND CONFIDENTIAL
ATTORNEY WORK PRODUCT

<u>VIA UPS</u>

Mark Sosebee
Nortel Networks Limited
2380 Performance Dr.
Dept. B400
Mail Stop: G7205A50
Richardson, TX 75081

Re: Declaration and Assignment
       "System and Method for Network Phone Having Adaptive Transmission Modes"
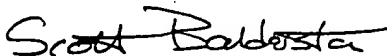   Nortel Reference: 11889RRUS01U

Dear Mark:

This letter encloses the Declaration and Power of Attorney and Assignment for the above referenced patent application. A copy of the patent application is also enclosed.

Could you please sign and date the Declaration and Assignment, and kindly have your colleague Greg Osterhout do the same and return the papers to us in the enclosed UPS package. (Please note that the Assignment has a witness line, as well). We are forwarding an additional copy of the Declaration and Assignment to Jim Mcalear for the same.

Thanks for your attention to these papers. After we receive them, we will file the application with the Government.

Very truly yours,

Scott Balderston

Scott D. Balderston

SDB:dmo
Enclosure(s)

HUNTON & WILLIAMS

August 28, 2000

PRIVILEGED AND CONFIDENTIAL
ATTORNEY WORK PRODUCT

<u>VIA UPS</u>

Mark Sosebee
Nortel Networks Limited
2380 Performance Dr.
Dept. B400
Mail Stop: G7205A50
Richardson, TX 75081

Re: "System and Method for Network Phone Having Adaptive Transmission Modes"
       Nortel Reference: 11889RRUS01U

Dear Mark:

This letter encloses the updated Declaration and Power of Attorney and Assignment for the above referenced patent application. A copy of the updated patent application with Jim Mcalear's last changes is also enclosed.

Could you please sign and date the Declaration and Assignment, and kindly have Greg Osterhout do the same and return the papers to us in the UPS package that was sent with our letter of August 21, 2000. We have forwarded an additional copy of the Declaration and Assignment to Jim Mcalear for the same.

Thanks for your attention to these papers. After we receive them, we will file the application with the Government.

Very truly yours,

Scott Balderston

Scott D. Balderston

SDB:dmo
Enclosure(s)

HUNTON& WILLIAMS

August 28, 2000

PRIVILEGED AND CONFIDENTIAL
ATTORNEY WORK PRODUCT
VIA UPS

Jim A. Mcalear
Nortel Networks Limited
21 Richardson Side Road
Kanata, Ontario, CANADA
K2K 2C1

Re: Updated Declaration and Assignment
        "System and Method for Network Phone Having Adaptive Transmission Modes"
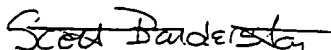   Nortel Reference: 11889RRUS01U

Dear Jim:

This letter encloses the updated Declaration and Power of Attorney and Assignment for the above referenced patent application. A copy of the updated patent application, incorporating the changes you pointed out last week, is also enclosed.

Could you please sign and date the Declaration and Assignment, and return the papers to us in the UPS package that was sent with our letter of August 21, 2000 for filing with the Government. We have also forwarded a copy of the Declaration and Assignment to Greg Osterhout and Mark Sosebee for the same.

Thanks for your attention to these papers. After we receive them, we will file the application with the Government. We look forward to securing patent recognition for you and the company.

Very truly yours,

Scott Balderston

Scott D. Balderston

SDB:dmo
Enclosure(s)

JOINT DECLARATION FOR PATENT APPLICATION AND POWER OF ATTORNEY

As the below named inventors, we hereby declare that:

Our residences, post office addresses and citizenship are as stated below next to our names;

We believe that we are the original, first and joint inventors of the subject matter which is claimed and for which a patent is sought on the invention entitled **SYSTEM AND METHOD FOR NETWORK PHONE HAVING ADAPTIVE TRANSMISSION MODES**, the specification of which

    X is attached hereto.
    ☐ was filed on   as Application Serial Number   and was
       amended on
                       (if applicable)

We hereby state that we have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to in this declaration.

We acknowledge the duty to disclose all information known to us to be material to the patentability of this application, as defined in 37 C.F.R. § 1.56.

We acknowledge the duty to disclose to the Office all information known to us to be material to patentability as defined in § 1.56, which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

Prior Foreign Application(s)

We hereby claim foreign priority benefits under Title 35, United States Code, § 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application(s) for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Country	Application Number	Date of Filing (day, month, year)	Date of Issue (day, month, year)	Priority Claimed Under 35 U.S.C. 119
				Yes ☐ No ☐
				Yes ☐ No ☐

Prior United States Provisional Application(s)

I hereby claim the benefit under Title 35, United States Code, § 119(e) of any United States provisional application(s) listed below

Application Serial Number	Date of Filing (day, month, year)

Prior United States Application(s)

We hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, we acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, § 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:
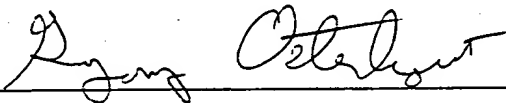
Application Serial Number	Date of Filing (day, month, year)	Status - Patented, Pending, Abandoned

And we hereby appoint, both jointly and severally, as our attorneys with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith the following attorneys, their registration numbers being listed after their names:

Thomas J. Scott, Jr., Registration No. 27,836; Stanislaus Aksman, Registration No. 28,562; James G. Gatto, Registration No. 32,694; Christopher C. Campbell, Registration No. 37,291;; Henry C. Su, Registration No. 37,738; Brian M. Buroker, Registration No. 39,125; Charles F. Hollis, Registration No. 40,650; Jonathan D. Link, Registration No. 41,548; Kevin T. Duncan, Registration No. 41,495; George Georgellis, Registration No. 43,632; Stephen T. Schreiner, Registration No. 43,097; Christopher J. Cuneo, Registration No. 42,450; Raphael A. Valencia, Registration No. 43,216; Scott D. Balderston, Registration No. 35,436; Steven P. Klocinski, Registration No. 39,251; Yisun Song, Registration No. 44,487; Jennifer A. Albert, Registration No. 32,012; Kerry Owens, Registration No. 37,412; Milan M. Vinnola, Registration Number 45,979; Devin S. Morgan, Registration No. 45,562; Andrew J. Ririe, Registration No. 45,597; Carl Benson, Registration No. 38,378; Thomas E. Anderson, Registration No. 37,063; Thomas Blasey, Registration No. 33,475; Robin Clark, Registration No. 40,956; René Vazquez, Registration No. 38,647 and David M. Huntley, Registration No. 40,309.

All correspondence and telephone communications should be addressed to Hunton & Williams, 1900 K Street, N.W., Washington, D.C. 20006-1109, telephone number (202) 955-1500, which is also the address and telephone number of each of the above listed attorneys.

We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signature _____   Date   9/27/2000

Full Name of
First Inventor   OSTERHOUT   Gregory   T.
                 Family Name   First Given Name   Second Given Name

Residence   Coppell, TX

Citizenship   U.S.A.

Post Office
Address   313 Falcon Ct., Coppell, TX 75019

And we hereby appoint, both jointly and severally, as our attorneys with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith the following attorneys, their registration numbers being listed after their names:

Thomas J. Scott, Jr., Registration No. 27,836; Stanislaus Aksman, Registration No. 28,562; James G. Gatto, Registration No. 32,694; Christopher C. Campbell, Registration No. 37,291;; Henry C. Su, Registration No. 37,738; Brian M. Buroker, Registration No. 39,125; Charles F. Hollis, Registration No. 40,650; Jonathan D. Link, Registration No. 41,548; Kevin T. Duncan, Registration No. 41,495; George Georgellis, Registration No. 43,632; Stephen T. Schreiner, Registration No. 43,097; Christopher J. Cuneo, Registration No. 42,450; Raphael A. Valencia, Registration No. 43,216; Scott D. Balderston, Registration No. 35,436; Steven P. Klocinski, Registration No. 39,251; Yisun Song, Registration No. 44,487; Jennifer A. Albert, Registration No. 32,012; Kerry Owens, Registration No. 37,412; Milan M. Vinnola, Registration Number 45,979; Devin S. Morgan, Registration No. 45,562; Andrew J. Ririe, Registration No. 45,597; Carl Benson, Registration No. 38,378; Thomas E. Anderson, Registration No. 37,063; Thomas Blasey, Registration No. 33,475; Robin Clark, Registration No. 40,956; René Vazquez, Registration No. 38,647 and David M. Huntley, Registration No. 40,309.

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We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signature _Jim McAlear_ Date _Aug 30, 2000_

Full Name of
Second Inventor **MCALEAR**   **JIM**   **A.**
                 Family Name   First Given Name   Second Given Name

Residence   Stittsville, ON Canada

Citizenship Canada

Post Office
Address   2 Lone Meadow Trail, Stittsville, ON K2S1C9 Canada

And we hereby appoint, both jointly and severally, as our attorneys with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith the following attorneys, their registration numbers being listed after their names:

Thomas J. Scott, Jr., Registration No. 27,836; Stanislaus Aksman, Registration No. 28,562; James G. Gatto, Registration No. 32,694; ·Christopher C. Campbell, Registration No. 37,291;; Henry C. Su, Registration No. 37,738; Brian M. Buroker, Registration No. 39,125; Charles F. Hollis, Registration No. 40,650; Jonathan D. Link, Registration No. 41,548; Kevin T. Duncan, Registration No. 41,495; George Georgellis, Registration No. 43,632; Stephen T. Schreiner, Registration No. 43,097; Christopher J. Cuneo, Registration No. 42,450; Raphael A. Valencia, Registration No. 43,216; Scott D. Balderston, Registration No. 35,436; Steven P. Klocinski, Registration No. 39,251; Yisun Song, Registration No. 44,487; Jennifer A. Albert, Registration No. 32,012; Kerry Owens, Registration No. 37,412; Milan M. Vinnola, Registration Number 45,979; Devin S. Morgan, Registration No. 45,562; Andrew J. Ririe, Registration No. 45,597; Carl Benson, Registration No. 38,378; Thomas E. Anderson, Registration No. 37,063; Thomas Blasey, Registration No. 33,475; Robin Clark, Registration No. 40,956; René Vazquez, Registration No. 38,647 and David M. Huntley, Registration No. 40,309.

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Signature _Mark Sosebee_   Date 9/27/2000

Full Name of
Third Inventor   **SOSEBEE**   **MARK**
                      Family Name   First Given Name   Second Given Name

Residence   Plano, TX

Citizenship   U.S.A.

Post Office
Address   920 Goodwin Drive, Plano, TX 75023

<div align="center">

HUNTON & WILLIAMS
1900 K Street, N.W., Suite 1200
Washington, D.C. 20006-1109
Tel: (202) 955-1500
Fax.: (202) 778-2201

</div>

JGG/SDB

UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C. 20231
www.uspto.gov

APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	DRAWINGS	TOT CLAIMS	IND CLAIMS
09/671,736	09/29/2000	2664	762	11889RR/56130.000011	5	24	2

CONFIRMATION NO. 2264

CORRECTED FILING RECEIPT

Hunton & Williams
1900 K Street NW
Washington, DC 20006-1109

OC000000005760128

Date Mailed: 02/13/2001

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Customer Service Center. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the PTO processes the reply to the Notice, the PTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).**

Applicant(s)
    Gregory T. Osterhout, Coppell, TX;
    Jim A. McAlear, Stittsville, CANADA;
    Mark Sosebee, Plano, TX;

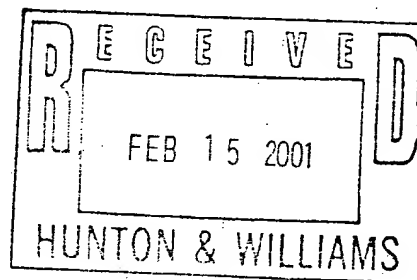Continuing Data as Claimed by Applicant

Foreign Applications

If Required, Foreign Filing License Granted 11/16/2000

Projected Publication Date:

Non-Publication Request: No

Early Publication Request: No

RECEIVED
FEB 15 2001
HUNTON & WILLIAMS

REVIEWED
SW

Title
    System and method for network phone having adaptive transmission modes

Preliminary Class
    370

Data entry by : SHEFFEY, CATHERINE   Team : OIPE   Date: 02/13/2001

LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CRF 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 36 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Office of Export Administration, Department of Commerce (15 CFR 370.10 (j)); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

PLEASE NOTE the following information about the Filing Receipt:

- The articles such as "a," "an" and "the" are not included as the first words in the title of an application. They are considered to be unnecessary to the understanding of the title.
- The words "new," "improved," "improvements in" or "relating to" are not included as first words in the title of an application because a patent application, by nature, is a new idea or improvement.
- The title may be truncated if it consists of more than 600 characters (letters and spaces combined).
- The docket number allows a maximum of 25 characters.
- If your application was submitted under 37 CFR 1.10, your filing date should be the "date in" found on the Express Mail label. If there is a discrepancy, you should submit a request for a corrected Filing Receipt along with a copy of the Express Mail label showing the "date in."
- The title is recorded in sentence case.

Any corrections that may need to be done to your Filing Receipt should be directed to:

Assistant Commissioner for Patents
Office of Initial Patent Examination
Customer Service Center
Washington, DC 20231

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: :

    Gregory T. Osterhaut et al.   : Group Art Unit: 2264

Appln. No.: 09/671,736   :

Filed: September 29, 2000   : Examiner: D. Ryman

For: SYSTEM AND METHOD FOR NETWORK :
    PHONE HAVING ADAPTIVE   :
    TRANSMISSION MODES   :

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION UNDER 37 C.F.R. § 1.131

Sir:

I, Mark Sosebee, hereby declare that I am a co-applicant in the above-identified patent application and that I am also a co-inventor of the invention that is described and claimed in the above-identified patent application. I also hereby declare that prior to November 10, 1999, my co-inventors and I conceived of the invention that is described and claimed in the above-identified patent application as evidenced by the following:

1. Prior to November 10, 1999, my co-inventors and I conceived of the invention in the United States and Canada, which is a NAFTA and WTO member country. Date redacted copies of email which describe reduction to practice of the claimed invention are attached hereto as Exhibit A. At the time of the

invention, I owed a duty of assignment of the invention to

Nortel Networks Limited (hereinafter "Nortel").

2. Shortly after my co-inventors and I conceived of the invention, my co-inventors and I submitted a description of the invention to the appropriate Nortel patent review committee for purposes of obtaining approval to file a patent application for the invention. A date redacted copy of the description of the invention (i.e., our invention disclosure) is attached hereto as Exhibit B.

3. To the best of my knowledge, the Nortel patent review committee followed its standard procedures in reviewing and subsequently approving of the filing of a patent application based upon our invention disclosure. A date redacted copy of an internal Nortel memo approving the filing of the patent application is attached hereto as Exhibit C.

4. On March 1, 2000, our invention disclosure was forwarded to one of Nortel's outside patent attorneys for preparation of a patent application. A copy of a transmittal letter authorizing preparation of a patent application is attached hereto as Exhibit D.

5. Between March 1, 2000, and August 11, 2000, my co-inventors and I had discussions regarding our invention disclosure with the outside patent attorneys, and provided additional supporting materials to the outside patent attorneys,

all intended to assist the outside patent attorneys in preparing a patent application for the invention.

6. On August 11, 2000, my co-inventors and I were forwarded a draft of the patent application. A copy of the transmittal letter sending the draft is attached hereto as Exhibit E.

7. On August 18, 2000, my co-inventor was forwarded a draft of the patent application. A copy of the transmittal letter sending the draft is attached hereto as Exhibit F.

8. On August 21, 2000, I was forwarded a draft of the patent application. A copy of the transmittal letter sending the draft is attached hereto as Exhibit G.

9. On August 28, 2000, my co-inventor and I were forwarded a final draft of the patent application. A copy of the transmittal letter sending the draft is attached hereto as Exhibit H.

10. On September 27, 2000, I executed the above-identified patent application. A copy of my signed declaration filed with the application is attached hereto as Exhibit I.

11. On September 29, 2000, the above-identified patent application was filed. A copy of the filing receipt for the application is attached hereto as Exhibit J.

I further hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

DECLARANT: _Mark Sosebee_

Mark Sosebee

Date: _12-22-04_

From: Ameen, Mehmud [KAN:0M23:EXCH] [IMCEAEX-
          _O=NORTEL_OU=AMERICASM01_CN=RECIPIENTS_CN=EXCHANGE_CN=0525551@AmericasM0

Sent:

To: Sosebee, Mark [NGC:B631:EXCH]

Subject: RE: Messages for USB-SIP server

Hi Mark

The attachment lists the messages and the byte fields. On a simplified level we only need the setup, setup acknowledge, call proceeding, disconnect and audio messages. These are sufficient to set up an end-to-end communication. However, there is some merit in adding register client, regsiter client acknowledgement, connect and connect acknowledgement messages. These are all described in detail in the attachment.

Once the connection has been established the audio message can be used to shuttle the conversation audio data between the two parties. The USB client will send the data to the SIP server which can adapt and forward it to the remote phone and vice versa.

The issue of multiple conversations between pairs of telephones still needs to be resolved. The SIP server structure should allow for this.

Best regards
Mehmud

<<messages.doc>>

          ----Original Message----
          From: Sosebee, Mark [RICH6:B400:EXCH]
          Sent:
          To: Ameen, Mehmud [KAN:0M23:EXCH]
          Subject: RE: Messages for USB-SIP server

          Can you send the format of all msgs that are currently generated between the USB Gateways. After the conversation yesterday I think there are only 2 msgs the initiateCall and the ACK. If there are any others please include them.

          Thanks for the info,

          Mark

          -----Original Message-----
          From: Ameen, Mehmud [KAN:0M23:EXCH]
          Sent:
          To: Sosebee, Mark [RICH6:B400:EXCH]
          Cc: Osterhout, Greg [RICH6:B400-M:EXCH]
          Subject: Messages for USB-SIP server

          Hi Mark

I have spent sometime looking at the UNISTIM protocol specification. I think to get the basic voice call from a PSTN phone to my USB phone I only need the following commands:

USB PHONE ===> USB Gateway ==> SIP/USB Server ==> PSTN ==> Remote phone (Simplified diagram for call setup)

A. Call from a USB phone to a phone on the PSTN

1. Setup Command to the called number: Parms: Calling party number, Called party Number. Somebody along the way has to convert the telephone numbers into IP addresses and send the media ports for RTP. I did not find any UNISTIM command that takes a normal telephone number as a paramter for call setup. The softphone (H.323 client) setup command does.The Open Audio Stream command only takes port numbers and the IP address. Also, I don't think we need a separate command to open the media ports and do call setup. Both the connection setup and the media ports can be opened in one command.

2. Acknowledgement or a connect message from the called party indicating that connection is made.

I am not sure if we need the call proceeding or alerting messages as used by the softphone using the H.323 setup. Once the connection is confirmed the USB client will turn on the AUDIO.

3. A connection teardown from either phone to the other phone on a on-hook or release event.The USB client will observe an on-hook event on the USB phone and send a Disconnect command to the remote phone. Or the remote phone will send a disconnect command and the USB client will do shut down.

B. USB phone receives a PSTN call

1. The USB phone receives a setup command
2. Acknowledges by sending a connect command or an ack command.
3. Tears down connection on a disconnect event.

The USB phone plays 8byte audio samples every 1ms (giving 64kbps). To increase the thoughput over the IP/Ethernet network I normally buffer my speech before I send it to the USB gateway. The USB gateway then takes 8bytes of raw PCM speech and sends its every one msec to the USB phone. We may have to play around with the audio packet size to get the best performance over the IP network.

I am still not very familiar with the UNISTIM and SIP protocols and am open to suggestions. We may have to add more commands to get the communication going. Please let me know. One thing to keep in mind is that I have been using native UDP to do all my connection setup and audio transmission for calls between USB phones. UNISTIM uses the reliable UDP protocol. This may mean code rewrite for me unless we can work something out.

The other thing that we need to worry about is the ability to query the menu options and services on the remote phone and display these on the two-line USB phone display for caller selection. The caller can scroll up/down the list using the up/down keys on the usb phone key pad. Somehow we need a mechanism to send the menu option commands back to the called phone for appropriate action. One solution could be to append a * to the called number and this will return all the options available on the called phone and then to select a particular option we send the option as *option. For example if were dialing 621-5555, 621-5555* will return all the options without connecting the call and then 621-5555*1 will activate the first option. If option 1 was another submenu then the process could be repeated until we reach to the desired option. So 621-5555*1*5 would mean the 5th item on the first option, etc. The first time around it no doubt be tideous going through all the menu options but the user will be able to store the commonly used options as hyperlinks on the save keys of the USB phone keypad. The next time around one key push will lauch the correct option. These are my initial thoughts on how this can be implemented. Again I look forward to your comments.

I will be making arrangements to come and see you but I would like both of us have a fairly good understanding of what needs to be done. This will make the meeting more productive. I will bring a laptap and the USB phone gear so we can do some joint development and testing. How is early next week for you? Mark, do you have an emulated version of the E2 phone using UNISTIM and the SIP server. I would like to initiate calls between two E2 phones to see what messages are passed between the two using a protocol sniffer.

Best regards
Mehmud Ameen

NSaPN/CPS, Nortel Networks
21 Richardson Side Road, Kanata, Ontario, K2K 2C1
Canada
E-mail: <mailto:mehmud@nortelnetworks.com>
Phone: (613) 763 - 9733 (ESN 393)
Fax: (613) 765 - 2173 (ESN 395)

```c
#define MAXNUMSIZE 16
#define MAXACTIONSIZE 128
#define MAXAUDIOSIZE 512

/* Message category */
typedef enum
{
       SIP = 101   /* Sip server messages. */
};

/* Message Type values */
typedef enum
{
       ALERTING           = 0x01,     /* Alerting */
       CALL_PROCEEDING    = 0x02,     /* Call proceeding */
       CONNECT            = 0x07,     /* Call Connect. */
       CONNECT_ACK        = 0x0F,     /* Connect acknowledge. */
       SETUP              = 0x05,     /* Call setup. */
       SETUP_ACK          = 0x09,     /* Call setup acknowledge. */
       DISCONNECT         = 0x45,     /* Call disconnect. */
       REGISTER           = 0x0A,     /* Register Client. */
       REGISTER_ACK       = 0x0B,     /* Register Client ack. */
       AUDIO              = 0x0C
};

/* Registration status values */
typedef enum
{
       REGISTERED,
       REJECTED
};

/* Progress Indicator values. */
typedef enum
{
       SETUPINPROGRESS,
       SETUPREJECTED,
       SETUPCOMPLETE,
       CONNECTED,
       DISCONNECTED
}

  /*    Register Client - This command is optional. It can be used to
        register the client with the gatekeeper or a network
        server/gateway. The registration establishes a mapping between the
        telephone number and the IP address of the client. Alternatively,
        the registration could be automatically done by the server when it
        receives a setup message from the client. All the registration
        information is already available in the setup message. The
        telephone of the calling party is known so is the Ip address.
  */
typedef struct
{
       unsigned char  messageCategory; /* 1 byte message category. */
       unsigned char  messageType;    /* 1 byte message type.*/
       unsigned long  callingPartyIPAddress; /* IP address of client. */

       /* 2 bytes - Length of the calling party number in bytes. */
       unsigned short lenCallingPartyNo;

       /* MAXNUMSIZE bytes - extract only the last lenCallingPartyNo
```

```
                bytes from this field.
        */
        unsigned char      callingPartyNo[MAXNUMSIZE];
} TregisterClient, *PRegisterClient;


/*      Register Acknowledge - This message is returned by the network to
        indicate that the client has been registered. Used only if the
        Register Client message is used.
*/
typedef struct
{
        /* One byte message category = USB class or SIP class messages -
           will be defined later
        */
        unsigned char      messageCategory;
        unsigned char      messageType;

        /* Indicates whether the client was registered. */
        unsigned char      status;
} TRegisterClient *PRegisterClient;


/*      Setup Message - This message is sent by the calling user to the
        network and by the network to the called user to initiate call
        establishment.
*/
typedef struct
{
        unsigned char      messageCategory;
        unsigned char      messageType;
        unsigned short     callRefValue;        /* See note */
        unsigned short     lenCallingPartyNo;
        unsigned char      callingPartyNo[MAXNUMSIZE];
        unsigned short     lenCalledPartyNo;
        unsigned char      calledPartyNo[MAXNUMSIZE];
        unsigned char      setupActionType;
        unsigned short     lenActionString;
        unsigned char      actionString[MAXACTIONSIZE];
} TCallSetupMessage, *PCallSetupMessage;


/*      Setup Acknowledge - This message is sent by the network to the
        calling user, or by the called user to the network, to indicate
        that call establishment has been initiated, but additional
        information may be requested.
*/
typedef struct
{
        unsigned char      messageCategory;
        unsigned char      messageType;
        unsigned short     callRefValue;
        unsigned short     progressIndicator;
        unsigned short     lenResponseString;
        unsigned char      responseString[MAXACTIONSIZE];
} TCallSetupAck,   *PCallSetupAck;


/*      Call Proceeding - this message is sent by the called user to the
        network or by the network to the calling user to indicate that
        requested call establishment has been initiated and no more call
        establishment information will be accepted.
*/
typedef struct
{
```

```
            unsigned char      messageCategory;
            unsigned char      messageType;
            unsigned short     callRefValue;
            unsigned short     progressIndicator;
} TCallProceeding, *PCallProceeding;
```

```
/*      Connect - This message is optional. It is sent by the called user
        to the network and by the network to the calling user, to indicate
        call acceptance by the called user. The Setup acknowledge message
        may be used alternatively to indicate call connect.
*/
typedef struct
{
            unsigned char      messageCategory;
            unsigned char      messageType;
            unsigned short     callRefValue;
            unsigned short     progressIndicator;
} TCallConnect,              *PCallConnect;
```

```
/*      Connect Acknowledgement - This message is optional and only used
        if the connect message is used. It is sent by the network to the
        called user to indicate that the user has been awarded the call.
*/
typedef struct
{
            unsigned char      messageCategory;
            unsigned char      messageType;
            unsigned short     callRefValue;
} TCallConnectAck,          *PCallConnectAck;
```

```
/*      Disconnect - This message is sent by the user to request the
        network to clear an end-to-end connection or is sent by the
        network to indicate that the end-to-end connection is cleared.
*/
typedef struct
{
            unsigned char      messageCategory;
            unsigned char      messageType;
            unsigned short     callRefValue;
            unsigned short     progressIndicator;
} TCallDisconnect,          *PDisconnect;
```

```
/*      Audio - This message carries the audio data between the two
        phones.
*/
typedef struct
{
            unsigned char      messageCategory;
            unsigned char      messageType;
            unsigned short     callRefValue;
            unsigned short     lenAudioData;
            unsigned char      audioData[MAXAUDIOSIZE];
} TCallSetupAck,    *PCallSetupAck;
```

```
/*      Notes:
        1.      The call reference value (CRV) is used to identify a call.
                It is assigned by the originating side of the interface for
                a acall. It is unique to the originating side only for a
                given call. The CRV is assigned at the beginning of a call
```

and remains fixed for the lifetime of a call. After a call
ends the value may be resued.

```
*/
```

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Invention Disclosure Submission Reply

(Attachments?: NO)

Your Invention Disclosure Submission Has Been Received in the
Patent Database on **You Will Receive An**
Acknowledgement From the Patent Department Within Two Weeks.

You May **Print** the Following Record of Your Transaction by
Selecting File...Print Within Netscape.

Disclosure Number:	11889122
Invention Title: SIP-Based USB Phone	

Full legal name of first inventor: GREGORY T OSTERHOUT **Name usually known as:** GREGORY	**Residence address:** 313 FALCON CT, COPPELL, TX, 75019, UNITED STATES
Global ID Number: 1585519	**Citizen of:** UNITED STATES
Phone: 4444989	**Fax:** 9726843705
External Phone: 9726844989	**External Fax:** 9726843705
Location: NGC	**Mailstop:** G7205A50
Department: B400	**Occupation:** SENIOR MANAGER IP ADVANCED SERVICES
Were there additional inventors involved? yes	**Was there contractor involvement?** no

Name of supervisor or divisional head: KIM HOLMES	Name of AVP reported to: BRUCE GALT

LOB: Carrier Solutions

Business Unit: Technology

Date of first written description:

Has this invention been discussed with others? If so, please complete: **Inside Nortel - to whom?**

Inside Nortel - when?

Outside Nortel - to whom?

Outside Nortel - to when?

Was there a Non-Disclosure Agreement in place? no

Are you aware of any imminent disclosures? Please provide dates and details. No

Key words for searching: SIP, USB

Products that will use this invention: This service is to be implemented as part of the NetFX services portfolio. This service has a great deal of potential in the emerging SIP-enabled multi-media networks, which are primarily implemented using IP protocols. The concept behind this service is such that it would be fairly obvious that a competitor has implemented a very similar type of capability. This type of service would very likely be something that competitors to Nortel would have a great interest in, and as such would place Nortel in an excellent position to reap royalty benefits or to negotiate reciprocal agreements for the royalty-free use of competitors' patent(s).

Does this invention arise from any arrangement involving any external organization? no

Is the invention relevant to a Standards activity? yes	If so, give details: The invention uses both the SIP and USB protocols. The SIP protocol is a standard held by the Internet Engineering Task Force (IETF). The USB protocol includes but is not limited to Nortel USB, Microsoft USB, or any USB device controlled by set API. The invention is for the SIP-Based USB phone functionality itself and as such is not related to any given standard. No form of this service definition has been submitted to any standards forum.

Internal project numbers under which this invention was funded: 6295

Technical Information:

Brief description of the invention:
This invention provides a SIP-Based USB Phone that interacts with an application running on a PC. The phone would have the following capabilites: 1) Communicate over a SIP network to SIP devices on the far end. 2) Provide a PSTN backup. 3) Multi-media control between the phone and PC. An RTP stack would reside in the SIP-Based USB phone to allow voice over IP. The RTP connection between end points is setup via SIP. The phone itself could contain a complete SIP stack or the phone could communicate with a USB gateway that would perform the SIP stack functionality. The phone could detect errors in the SIP network that would not allow a connection between the end points and allow calls to be completed using the PSTN backup functionality. A set of services would exist between the SIP-Based USB phone and the PC application. These services would include such things as intercom services or input/output connections to various media applications on the PC. For example, the phone could be used as a microphone input to a speech recognition engine that is providing dictation. The intercom service allows you to broadcast voice messages to multiple users on a network using there desired PC media device to deliver the message.

Problem solved by the invention:
This invention disclosure allows SIP-Based USB phones the ability to interact with multi-media applications running on a PC as well as the ability to communicate across a SIP network to other SIP enabled devices.

Solutions that have been tried and why they didn't work:
None

Specific elements or steps that solved the problem and how they do it:
This invention allows interactions between an application running a PC and a SIP-Based USB phone. This allows a bridge between multi-media applications on a PC and the capabilities of a SIP-based USB phone. This allows applications to be controlled remotely using SIP to setup the session between the end points, as well as an input/output source for resources on the PC.

Commercial value of the invention to Nortel and Nortel's major competitors:
Evaluation of the commercial value of this invention to Nortel Networks and its competitors has not yet been performed. The residential market is most likely to be the purchasers of this device, however the use of the device is dependent on IP bandwidth the location and SIP enabled network proxy servers (managed by a service provider).

Additional Inventors:

Full legal name of inventor #2: JIM J MCALEAR Name usually known as: JIM	Residence address: 2 LONE MEADOW TRAIL, STITTSVILLE, ON, K2S1C9, CANADA
Global ID Number: 1533026	Citizen of: CANADA
Phone: 3938648	Fax: 6137652173
External Phone: 3938648	External Fax:
Location: KAN	Mailstop: 1171ED03
Department: 0W03	Occupation: ENGINEER/MANAGER

Full legal name of inventor #3: MARK SOSEBEE **Name usually known as:** MARK	**Residence address:** 920 GOODWIN DRIVE, PLANO, TX, 75023, UNITED STATES
Global ID Number: 0505693	**Citizen of:** UNITED STATES
Phone: 4444225	**Fax:**
External Phone: 972-398-2910	**External Fax:**
Location: NGC	**Mailstop:** G7205A50
Department: B400	**Occupation:**

Eric F. Jensen
Sr. IP Counsel
Access Networks
Intellectual Property Law Group

P.O. Box 13828
RTP, North Carolina 27709-3828
Tel 919-997-2350 (ESN 357)
Fax 919-997-6659 (ESN 357)

NORTEL NETWORKS

How the world shares ideas.

Memorandum

**NORTEL NETWORKS CONFIDENTIAL &
PRIVILEGED COMMUNICATION**

Date | March 1, 2000

To | *Greg Osterhout, Jim McAlear, Mark Sosebee*

Copy | Scott Balderston, Hunton & Williams

From | *Eric Jensen*

Subject | **Invention Disclosure No. 11889RRUS01U**
entitled **SIP-Based USB Phone**

As previously indicated, the filing of a U.S patent application for the invention disclosed in the above-subject invention disclosure has been approved.

The Nortel Networks IP Law Group has retained Scott Balderston of Hunton & Williams (Telephone No. 202-955-1935) to prepare the patent application. You should be contacted by that individual (or a patent professional from that firm) within the next 7 to 10 days to discuss the preparation of the patent application and to develop a schedule for meeting the above-subject target filing date. If there are multiple inventors, that individual will also be contacting them at a later date (prior to the filing of the patent application). You will be working directly with this patent professional and should address any questions or concerns regarding the preparation of the patent application directly with that individual.

As an inventor who is likely to be named on a U.S. patent application, you have two duties:

1. Provide sufficient information about the invention in the patent application to enable one of ordinary skill in the area of the invention to make and use the invention; and

2. Disclose prior art that is relevant to the patent application.

The patent professional will further discuss both of these duties with you.

In meeting the first listed duty above, it will be very beneficial for you to immediately start gathering any written material you have describing the invention. Design documents, charts, and particularly drawings that represent the invention can generally be used in preparing the patent application. Please compile this information and have it ready for the patent professional. (If such written material does not exist, you will not necessarily be expected to create it, although you will be expected to describe it in detail to the patent professional.

Generally, the patent professional will visit you in person to discuss the particulars of the invention. At that meeting the invention information you have compiled will be particularly beneficial. The patent professional will then prepare a draft patent application that you will have to review. If there are multiple inventors, you and the patent professional will have to decide when during the drafting of the patent application the other inventors should review the application. Before the application can be filed with the United States Patent and Trademark Office (USPTO) *every* inventor must read and approve the patent application.

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How the world shares ideas.

Once each inventor has approved the patent application, each inventor will have to sign a Declaration and Power of Attorney. This document states that each named inventor is an inventor of the invention disclosed and claimed in the patent application and grants permission to Nortel Networks and its patent professionals to represent that inventor before the USPTO with respect to the application. Each inventor will also have to sign an Assignment of their rights in the patent application and invention to Nortel Networks as required by their Employment Agreement with Nortel Networks.

Finally, while the patent application for the invention is a legal document, it is also a technical document. If it is technically deficient in describing the invention, that can impact the validity of the patent that issues from the application. You should therefore feel comfortable with and understand the patent application. If you do not, then please work with the patent professional to make the application technically accurate.

Should questions or comments arise during the preparation of the patent application, please seek to address them with the above-named patent professional. If you do not get an acceptable response, then please feel free to contact me directly.

Let me again remind you that throughout the patent application process, the subject matter of the invention disclosure should continue to be regarded as Nortel Networks Confidential information and should be safeguarded against public disclosure. Any disclosure of the invention to any non-Nortel Networks employee (not subject to a confidentiality agreement) or outside of Nortel Networks prior to the filing of the patent application with a government patent office could compromise Nortel Networks' ability to obtain patent protection for the invention. Accordingly, it is important that you advise me and the above-named patent professional well in advance of any planned public disclosure of the invention. Should any public disclosure of the invention have already occurred, or is planned to occur, please notify us so that appropriate steps can be taken to potentially avoid adverse legal consequences. Thank you.

● ●

LuGay Blanscet
Patent Administrator/Outsourcing Liaison
Intellectual Property Law Group

2100 Lakeside Blvd., MS 466/05/B10
Richardson, TX 75082-4399
Tel 972 685-4802(ESN 445)
Fax 972 685-3030 (ESN 445)

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PRIVILEGED COMMUNICATION

March 1, 2000

Mr. Scott D. Balderston
Hunton & Williams
1900 K Street, NW
Washington, D.C. 20006-1109

Re: **Invention Docket No.: 11889RRUS01U**
     Title: SIP-Based USB Phone

Dear Scott:

Nortel Networks would like to retain your firm to prepare and file in the United States Patent and Trademark Office (USPTO) a patent application directed to the invention disclosed in the enclosed invention disclosure by the above-referenced filing date. The application should be prepared according to Nortel Networks guidelines, and in accordance with the predetermined fee we have agreed with your firm. If you are unable to perform the requested work, please advise me immediately.

In addition to the invention disclosure, an invention disclosure Review Summary document is enclosed for your consideration. We request that you contact the primary inventor, Gregory Osterhout at 972-684-4989 within two weeks of receiving this letter. Please ensure that the inventor(s) are advised of their responsibilities regarding their duty of candor to the USPTO, as well as any other relevant rules and/or laws including the best mode requirement.

We also ask that you quickly review the contents of this letter and its enclosures to ascertain whether or not any bar dates appear to be imminent. If so, we ask that you develop a plan of action to protect Nortel Networks' intellectual property rights in the invention disclosure.

Questions pertaining to substantive issues associated with the application should be addressed with Eric Jensen, the responsible attorney, at (919)997-2350, while administrative issues associated with the applications should be addressed with me. Please be sure that all communications associated with the application, including billing statements and the application itself bear the above-referenced disclosure number.

Please send a substantially complete and final draft of the application to me along with a completed Nortel Networks Outsource's Patent Application Checklist at least 10 days prior to the above-referenced filing date to provide Nortel Networks' Intellectual Property Law Group sufficient opportunity to review the application prior to filing. You should seek to obtain the signatures on the formal papers from all inventors directly.

Upon filing the application with the USPTO, immediately fax a copy of the application transmittal letter and Declaration to me, so that we have a record that the application has been filed.

Thereafter, please send me a hardcopy of the application as filed along with an electronic copy in Microsoft Word 6.0 readable format on a 3 ½" floppy disk.

Please confirm receipt of this letter via facsimile. Should you have any questions, please call me at (972)685-4802.

Regards

LuGay Blanscet
Patent Administrator
INTELLECTUAL PROPERTY LAW GROUP
NORTEL NETWORKS
972/685-4802 ESN: 445

Enclosures:

cc: Invention Disclosure
        Review Summary

HUNTON& WILLIAMS

August 11, 2000
PRIVILEGED AND CONFIDENTIAL
ATTORNEY WORK PRODUCT

<u>VIA UPS</u>

Kathlyn Hunter
Office Manager
Nortel Networks Limited
4006 E. Hwy 54
NC2 MSD16/02/0E2
Durham, NC 27713

Re: Draft Patent Application
Title: System and Method for Network Phone Having Adaptive Transmission Modes
Your Reference No.: 11889RRUS01U

Dear Kathlyn:

This letter encloses a completed draft application for the above-referenced invention. This draft incorporates all changes that were suggested by the inventors to date, and should be in complete or substantially complete form.

Could you kindly distribute the application to the responsible Nortel attorney for review. In the absence of that attorney's comments or instructions to the contrary, we will begin to prepare the application for filing by   . We will arrange to obtain the declarations and assignments from the inventors at that time.

If you have any questions, please do not hesitate to call.

Very truly yours,

Scott D. Balderston

Scott D. Balderston

SDB:dmo

Enclosure(s)

HUNTON & WILLIAMS

August 18, 2000

PRIVILEGED AND CONFIDENTIAL
ATTORNEY WORK PRODUCT
<u>VIA UPS</u>

Jim J. Mcalear
Nortel Networks Limited
21 Richardson Side Road
Kanata, Ontario, CANADA
K2K 2C1

Re: Declaration and Assignment
        "System and Method for Network Phone Having Adaptive Transmission Modes"
        Nortel Reference: 11889RRUS01U

Dear Jim:

This letter encloses the Declaration and Power of Attorney and Assignment for the above referenced patent application. A copy of the patent application is also enclosed.

Could you please sign and date the Declaration and Assignment, and return the papers to us in the enclosed UPS package. for filing with the Government. (Please note that the Assignment has a witness line, as well). We also forwarded a copy of the Declaration and Assignment to Greg Osterhout and Mark Sosebee for the same.

Thanks for your attention to these papers. After we receive them, we will file the application with the Government. We look forward to securing patent recognition for you and the company.

Very truly yours,

Scott Balderston

Scott D. Balderston

SDB:dmo
Enclosure(s)

HUNTON& WILLIAMS

August 21, 2000

PRIVILEGED AND CONFIDENTIAL
ATTORNEY WORK PRODUCT

<u>VIA UPS</u>

Mark Sosebee
Nortel Networks Limited
2380 Performance Dr.
Dept. B400
Mail Stop: G7205A50
Richardson, TX 75081

Re: Declaration and Assignment
     "System and Method for Network Phone Having Adaptive Transmission Modes"
     Nortel Reference: 11889RRUS01U

Dear Mark:

This letter encloses the Declaration and Power of Attorney and Assignment for the above referenced patent application. A copy of the patent application is also enclosed.

Could you please sign and date the Declaration and Assignment, and kindly have your colleague Greg Osterhout do the same and return the papers to us in the enclosed UPS package. (Please note that the Assignment has a witness line, as well). We are forwarding an additional copy of the Declaration and Assignment to Jim Mcalear for the same.

Thanks for your attention to these papers. After we receive them, we will file the application with the Government.

Very truly yours,

Scott Balderston

Scott D. Balderston

SDB:dmo
Enclosure(s)

HUNTON & WILLIAMS

1900 K STREET, N.W.
WASHINGTON, D.C. 20006-1109

TEL 202 • 955 • 1500
FAX 202 • 778 • 2201

SCOTT D. BALDERSTON
DIRECT DIAL: 202 • 955 • 1935
EMAIL: sbalderston@hunton.vom

August 28, 2000

FILE NO: 56130.000011

PRIVILEGED AND CONFIDENTIAL
ATTORNEY WORK PRODUCT

VIA UPS

Mark Sosebee
Nortel Networks Limited
2380 Performance Dr.
Dept. B400
Mail Stop: G7205A50
Richardson, TX 75081

Re: "System and Method for Network Phone Having Adaptive Transmission Modes"
        Nortel Reference: 11889RRUS01U

Dear Mark:

This letter encloses the updated Declaration and Power of Attorney and Assignment for the above referenced patent application. A copy of the updated patent application with Jim Mcalear's last changes is also enclosed.

Could you please sign and date the Declaration and Assignment, and kindly have Greg Osterhout do the same and return the papers to us in the UPS package that was sent with our letter of August 21, 2000. We have forwarded an additional copy of the Declaration and Assignment to Jim Mcalear for the same.

Thanks for your attention to these papers. After we receive them, we will file the application with the Government.

Very truly yours,

Scott Balderston

Scott D. Balderston

SDB:dmo
Enclosure(s)

ATLANTA BANGKOK BRUSSELS CHARLOTTE HONG KONG KNOXVILLE LONDON MCLEAN MIAMI
NEW YORK NORFOLK RALEIGH RICHMOND WARSAW WASHINGTON
www.hunton.com

HUNTON& WILLIAMS

August 28, 2000

PRIVILEGED AND CONFIDENTIAL
ATTORNEY WORK PRODUCT
VIA UPS

Jim A. Mcalear
Nortel Networks Limited
21 Richardson Side Road
Kanata, Ontario, CANADA
K2K 2C1

Re: Updated Declaration and Assignment
        "System and Method for Network Phone Having Adaptive Transmission Modes"
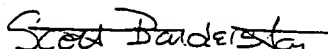   Nortel Reference: 11889RRUS01U

Dear Jim:

This letter encloses the updated Declaration and Power of Attorney and Assignment for the above referenced patent application. A copy of the updated patent application, incorporating the changes you pointed out last week, is also enclosed.

Could you please sign and date the Declaration and Assignment, and return the papers to us in the UPS package that was sent with our letter of August 21, 2000 for filing with the Government. We have also forwarded a copy of the Declaration and Assignment to Greg Osterhout and Mark Sosebee for the same.

Thanks for your attention to these papers. After we receive them, we will file the application with the Government. We look forward to securing patent recognition for you and the company.

Very truly yours,

Scott Balderston

Scott D. Balderston

SDB:dmo
Enclosure(s)

JOINT DECLARATION FOR PATENT APPLICATION AND POWER OF ATTORNEY

As the below named inventors, we hereby declare that:

Our residences, post office addresses and citizenship are as stated below next to our names;

We believe that we are the original, first and joint inventors of the subject matter which is claimed and for which a patent is sought on the invention entitled <u>SYSTEM AND METHOD FOR NETWORK PHONE HAVING ADAPTIVE TRANSMISSION MODES</u>, the specification of which

    X   is attached hereto.
    ☐   was filed on   as Application Serial Number   and was
        amended on   .
                      (if applicable)

We hereby state that we have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to in this declaration.

We acknowledge the duty to disclose all information known to us to be material to the patentability of this application, as defined in 37 C.F.R. § 1.56.

We acknowledge the duty to disclose to the Office all information known to us to be material to patentability as defined in § 1.56, which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

Prior Foreign Application(s)

We hereby claim foreign priority benefits under Title 35, United States Code, § 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application(s) for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Country	Application Number	Date of Filing (day, month, year)	Date of Issue (day, month, year)	Priority Claimed Under 35 U.S.C. 119
				Yes ☐ No ☐
				Yes ☐ No ☐

Prior United States Provisional Application(s)

I hereby claim the benefit under Title 35, United States Code, § 119(e) of any United States provisional application(s) listed below

Application Serial Number	Date of Filing (day, month, year)

Prior United States Application(s)

We hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, we acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, § 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

Application Serial Number	Date of Filing (day, month, year)	Status - Patented, Pending, Abandoned

And we hereby appoint, both jointly and severally, as our attorneys with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith the following attorneys, their registration numbers being listed after their names:

Thomas J. Scott, Jr., Registration No. 27,836; Stanislaus Aksman, Registration No. 28,562; James G. Gatto, Registration No. 32,694; Christopher C. Campbell, Registration No. 37,291;; Henry C. Su, Registration No. 37,738; Brian M. Buroker, Registration No. 39,125; Charles F. Hollis, Registration No. 40,650; Jonathan D. Link, Registration No. 41,548; Kevin T. Duncan, Registration No. 41,495; George Georgellis, Registration No. 43,632; Stephen T. Schreiner, Registration No. 43,097; Christopher J. Cuneo, Registration No. 42,450; Raphael A. Valencia, Registration No. 43,216; Scott D. Balderston, Registration No. 35,436; Steven P. Klocinski, Registration No. 39,251; Yisun Song, Registration No. 44,487; Jennifer A. Albert, Registration No. 32,012; Kerry Owens, Registration No. 37,412; Milan M. Vinnola, Registration Number 45,979; Devin S. Morgan, Registration No. 45,562; Andrew J. Ririe, Registration No. 45,597; Carl Benson, Registration No. 38,378; Thomas E. Anderson, Registration No. 37,063; Thomas Blasey, Registration No. 33,475; Robin Clark, Registration No. 40,956; René Vazquez, Registration No. 38,647 and David M. Huntley, Registration No. 40,309.

All correspondence and telephone communications should be addressed to Hunton & Williams, 1900 K Street, N.W., Washington, D.C. 20006-1109, telephone number (202) 955-1500, which is also the address and telephone number of each of the above listed attorneys.

We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signature _____   Date 9/27/2000

Full Name of
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                  Family Name   First Given Name   Second Given Name

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And we hereby appoint, both jointly and severally, as our attorneys with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith the following attorneys, their registration numbers being listed after their names:

Thomas J. Scott, Jr., Registration No. 27,836; Stanislaus Aksman, Registration No. 28,562; James G. Gatto, Registration No. 32,694; Christopher C. Campbell, Registration No. 37,291;; Henry C. Su, Registration No. 37,738; Brian M. Buroker, Registration No. 39,125; Charles F. Hollis, Registration No. 40,650; Jonathan D. Link, Registration No. 41,548; Kevin T. Duncan, Registration No. 41,495; George Georgellis, Registration No. 43,632; Stephen T. Schreiner, Registration No. 43,097; Christopher J. Cuneo, Registration No. 42,450; Raphael A. Valencia, Registration No. 43,216; Scott D. Balderston, Registration No. 35,436; Steven P. Klocinski, Registration No. 39,251; Yisun Song, Registration No. 44,487; Jennifer A. Albert, Registration No. 32,012; Kerry Owens, Registration No. 37,412; Milan M. Vinnola, Registration Number 45,979; Devin S. Morgan, Registration No. 45,562; Andrew J. Ririe, Registration No. 45,597; Carl Benson, Registration No. 38,378; Thomas E. Anderson, Registration No. 37,063; Thomas Blasey, Registration No. 33,475; Robin Clark, Registration No. 40,956; René Vazquez, Registration No. 38,647 and David M. Huntley, Registration No. 40,309.

All correspondence and telephone communications should be addressed to Hunton & Williams, 1900 K Street, N.W., Washington, D.C. 20006-1109, telephone number (202) 955-1500, which is also the address and telephone number of each of the above listed attorneys.

We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signature _____Jim McAlear_____   Date Aug 30, 2000

Full Name of
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And we hereby appoint, both jointly and severally, as our attorneys with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith the following attorneys, their registration numbers being listed after their names:

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Signature _Mark Sosebee_   Date 9/27/2000

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APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	DRAWINGS	TOT CLAIMS	IND CLAIMS
09/671,736	09/29/2000	2664	762	11889RR/56130.000011	5	24	2

CONFIRMATION NO. 2264

CORRECTED FILING RECEIPT

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Washington, DC 20006-1109

Date Mailed: 02/13/2001

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Applicant(s)

        Gregory T. Osterhout, Coppell, TX;
        Jim A. McAlear, Stittsville, CANADA;
        Mark Sosebee, Plano, TX;
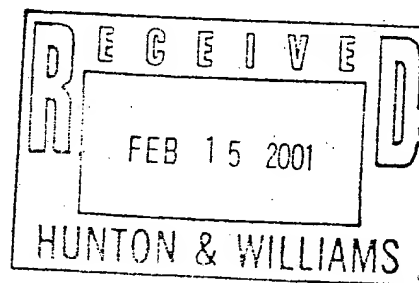
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Foreign Applications

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Early Publication Request: No

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Title
        System and method for network phone having adaptive transmission modes

Preliminary Class
        370

Data entry by : SHEFFEY, CATHERINE   Team : OIPE   Date: 02/13/2001

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